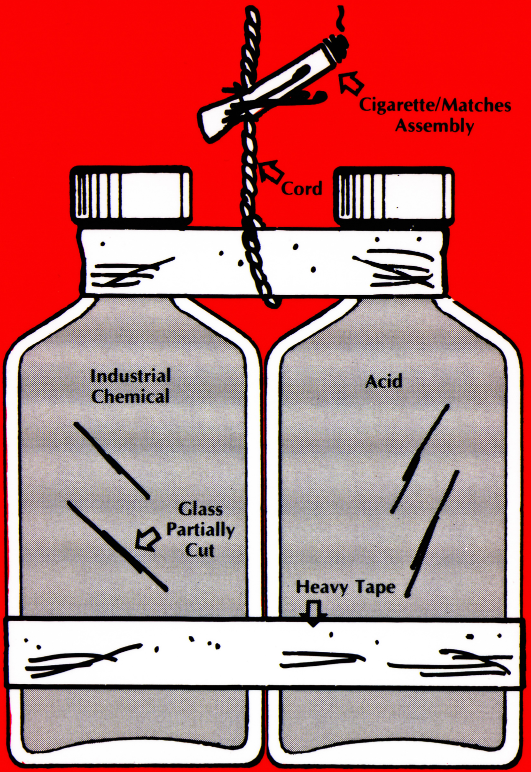
SEYMOUR LECKER

DEADLY BREW

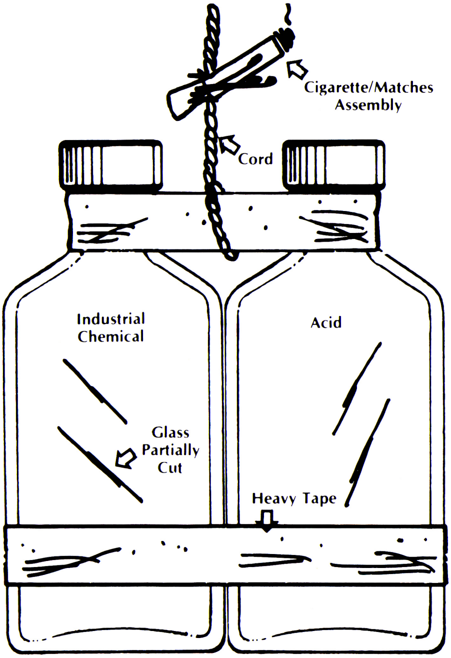

Cigarette/Matches Assembly
Cord
Industrial Chemical
Acid
Glass Partially Cut
Heavy Tape

ADVANCED IMPROVISED EXPLOSIVES

DEADLY BREW

SEYMOUR LECKER

DEADLY BREW


Cigarette/Matches Assembly
Cord
Industrial Chemical
Acid
Glass Partially Cut
Heavy Tape

ADVANCED IMPROVISED EXPLOSIVES

PALADIN PRESS
BOULDER, COLORADO

Also by Semour Lecker:

Homemade Semtex
Improvised Explosives
Poor Man's TNT: Improvised Guncotton
Professional Booby Traps

Deadly Brew: Advanced Improvised Explosives
by Seymour Lecker

Copyright © 1987 by Seymour Lecker

ISBN 0-87364-418-2
Printed in the United States of America

Published by Paladin Press, a division of
Paladin Enterprises, Inc., P.O. Box 1307,
Boulder, Colorado 80306, USA.
(303) 443-7250

Direct inquiries and/or orders to the above address.

PALADIN, PALADIN PRESS, and the "horse head" design are trademarks belonging to Paladin Enterprises and registered in United States Patent and Trademark Office.

All rights reserved. Except for use in a review, no portion of this book may be reproduced in any form without the express written permission of the publisher.

Neither the author nor publisher assumes any responsibility for the use or misuse of information contained in this book.

Visit our Web site at www.paladin-press.com

WARNING

The manufacture, possession, and use of explosives and explosive devices is illegal without certification from and registration with the proper authorities. It is the reader's responsibility to research and comply with all local, state, and federal laws regarding the manufacture, possession, and use of explosives and explosive devices.

The procedures described in this manual are *extremely dangerous.* Whenever dealing with explosives, special precautions must be followed in accordance with industry standards for experimentation and production of explosives. Failure to strictly follow such industry standards may result in harm to life and limb.

Therefore, the author, publisher, and distributors of this book disclaim any liability from any damages or injuries of any type that a reader or user of information contained within this book may encounter from the use of said information. Use the material presented in this manual and any end product or by-product at your own risk.

This book is *for academic study only.*

FOREWORD

This manual is intended to demonstrate the ease with which improvised explosive devices can be made from materials commonly used by industry.

I have included fifty common chemicals which will react explosively on contact with sulfuric acid and/or nitric acid. I have selected these specific chemicals because (1) sulfuric acid and nitric acid are the most common acids in America; (2) they are comparatively safe to handle; (3) the simplicity in designing an explosive device in which one component is an acid.

This manual is not a chemistry book and does not dwell in depth on the health risks or chemical reaction hazards which accompany these chemicals. Most of them will react violently with many other chemicals than those I describe.

These chemicals are all potentially dangerous or they would not have a place in this work. With proper care and safety precautions these chemicals can be used, and are used daily, in normal industrial settings.

CHAPTER I

SAFETY

In any dangerous situation it is always wise to take all possible precautions. Here are the ten most important safety tips:

1. Never store chemicals for extended periods.
2. Never store chemical combinations for any length of time.
3. Work in a cool, well ventilated area.
4. Keep sources of heat and electricity well away from the work area.
5. Keep the number of people in the work area to an absolute minimum.
6. Keep materials far apart.
7. Use a respirator while working.
8. Use safety goggles.
9. Wear as much protective rubber clothing as possible.
10. Have appropriate fire fighting equipment and large volumes of water close at hand.

CHAPTER II

ACIDS

SULFURIC ACID
(H_2SO_4)

The most highly produced industrial chemical in the U.S.A.

Synonyms:

Oil of vitreol, dipping acid.

Description:

Colorless or dark brown, oily liquid.

Uses:

Manufacture of iron, steel, rayon, film, fertilizers, and dyes; petroleum refining; etching; alkylation catalyst; electroplating baths; laboratory reagent; nonferrous metallurgy and batteries.

Hazards:

Highly toxic, extremely corrosive to body tissue; will cause immediate and severe burns; inhalation of vapor will cause loss of consciousness and severely damaged lung tissue; mists will seriously damage skin, eyes, and respiratory tract. Keep cool and dry.

First aid:

Inhalation — Move victim to fresh air. Give artificial respiration of oxygen if victim has stopped breathing.

Ingestion — Give large amounts of water if victim is conscious. Do not induce vomiting.

Skin contact — Remove contaminated clothing. Wash with large amounts of water.

Eye contact — Wash with large amounts of water.

SEEK MEDICAL ATTENTION!

Fire fighting:

Large volumes of water.

NITRIC ACID
(HNO_3)

The tenth highest-volume industrial chemical produced in the United States.

Synonyms:

Aquas fortis, hydrogen nitrate, azotic acid, engravers acid.

Description:

Transparent, colorless or yellowish, fuming liquid.

Uses:

Manufacture of ammonium nitrate fertilizer, dyes, drugs, lacquers, cellulose nitrate, nitrate salts, rubber chemicals, and urethanes; ore flotation; metallurgy; photoengraving; etching steel; reprocessing spent nuclear fuel.

Hazards:

Highly toxic; extremely corrosive to body tissue; will cause immediate and severe burns; will cause extensive damage to the eyes and respiratory system. Keep dry and cool.

First aid:

Inhalation — Move victim to fresh air. Give artificial respiration of oxygen if victim has stopped breathing. If damage to respiratory system clears up, it will, in all cases, return in a few hours in a more serious form.

Ingestion — Give large amounts of water if victim is conscious. Do not induce vomiting.

Skin Contact — Remove contaminated clothing. Wash with large amounts of water.

Eye Contact — Wash with large amounts of water.

SEEK MEDICAL ATTENTION!

Fire fighting:

Large volumes of water.

CHAPTER III

INDUSTRIAL CHEMICALS

ACETIC ACID
($C_2H_4O_2$)

Synonyms:

Methane carboxylic acid, vinegar acid, ethanoic acid.

Description:

Clear colorless liquid, pungent odor.

Uses:

Manufacture of cellulose acetate, plastics, dyes, insecticides, pharmaceuticals; textile printing.

Hazards:

Moderately toxic; can damage skin. Do not expose to heat or flame.

Fire fighting:

CO_2, dry chemical, alcohol foam, foam, mist.

Will explode on contact with:

H_2SO_4
HNO_3

ACETIC ANHYDRIDE
($C_4H_6O_3$)

Synonyms:

Acetyl oxide, acetic oxic, ethanoic anhydride.

Description:

Colorless liquid, strong acetic odor.

Uses:

Manufacture of pharmaceuticals, perfumes, dyes, vinyl acetate. Esterfying agent for food starch.

Hazards:

Moderately toxic; can damage skin. Keep cool and dry.

Fire fighting:

CO_2, dry chemical, alcohol foam.

Will explode on contact with:

H_2SO_4
HNO_3

ACETONE CYANOHYDRIN
(C_4H_7NO)

Synonym:

Ol-hydroxy isobutyro nitrile

Description:

Colorless liquid.

Uses:

Insecticides; intermediate for organic

synthesis.

Hazards:

Highly toxic; avoid inhalation. Keep cool.

Fire fighting:

CO_2, dry chemical, alcohol foam.

Will explode on contact with:

H_2SO_4

ACROLEIN
(C_3H_4O)

Synonyms:

Propenal, acrylic aldehyde, allyl aldehyde, acraldehyde.

Description:

Yellow or colorless liquid, choking odor.

Uses:

Manufacture of resins, pharmaceuticals, and polyurethane; herbicide; warning agent in gases.

Hazards:

Highly toxic; avoid inhalation and skin contact. Do not expose to heat or flame.

Fire fighting:

CO_2, dry chemical, alcohol foam.

Will explode on contact with:

H_2SO_4
HNO_3

ALLYL ALCOHOL
(C_3H_6O)

Synonym:

Vinyl carbinol

Description:

Clear liquid, pungent odor.

Uses:

Manufacturing of resins, plasticizers, pharmaceuticals; used as a herbicide.

Hazards:

Highly toxic; avoid inhalation or skin contact. Dangerous when exposed to heat or flame.

Fire fighting:

CO_2, alcohol foam, dry chemical.

Will explode on contact with:

H_2SO_4
HNO_3

ALLYL CHLORIDE
(C_3H_5Cl)

Synonym:

3-Chloropropene

Description:

Colorless liquid, pungent odor.

Uses:

Manufacturing of varnish, plastic, adhesives, pharmaceuticals.

Hazards:

Highly toxic; avoid inhalation or skin contact. Do not expose to heat or flame; keep well ventilated.

Fire fighting:

CO_2, alcohol foam, dry chemical.

Will explode on contact with:

H_2SO_4
HNO_3

ANILINE
(C_6H_7N)

Synonyms:

Aminobenzene, aniline oil, phenylamine.

Description:

Colorless, oily liquid. Strong odor. Brown when exposed to air or light.

Uses:

Manufacture of rubber, dyes, photographic chemicals, pharmaceuticals and urethane foams; refining petroleum.

Hazards:

Highly toxic; avoid inhalation and skin contact. Keep cool.

Fire fighting:

Alcohol foam, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4
HNO_3

ANILINE ACETATE
($C_8H_{11}NO_2$)

Synonyms:

None

Description:

Colorless liquid. Becomes dark with age.

Uses:

Organic synthesis.

Hazards:

Highly toxic; avoid inhalation. Keep cool.

Fire fighting:

Alcohol foam, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4
HNO_3

ANILINE HYDROCHLORIDE
(C_6H_8NCl)

Synonyms:

Aniline chloride, aniline salt.

Description:

White or green crystals.

Uses:

Dyeing and printing.

Hazards:

Highly toxic; avoid inhalation. Keep away from heat and flame.

Fire fighting:

Water, CO_2, water mist or spray, dry chemical.

Will explode on contact with:

H_2SO_4
HNO_3

BENZOYL PEROXIDE
($C_{14}H_{10}O_4$)

Synonyms:

Lucidol, dibenzoyl peroxide.

Description:

White granules, tasteless, odorless.

Uses:

Bleaching agent for flour, fats, oils and waxes; drying agent for unsaturated oils and pharmaceuticals; production of cheese.

Hazards:

Toxic; avoid inhalation; will irritate skin. Do not expose to heat, flame, sparks, or strong sunlight; do not shock.

Fire fighting:

Water, foam.

Will explode on contact with:

H_2SO_4
HNO_3

CARBON DISULFIDE
(CS_2)

Synonym:

Carbon bisulfide

Description:

Clear, colorless liquid. Odorless.

Uses:

Manufacture of viscose rayon, cellophane, and flotation agents.

Hazards:

Highly toxic; avoid inhalation or contact with skin. Do not expose to heat, flame, sparks, or friction.

Fire fighting:

Water, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4

CHLOROSULFONIC ACID
(HSO_3Cl)

Synonym:

Sulfuric chlorohydrin

Description:

Clear or cloudy, colorless or yellow liquid. Sharp odor.

Uses:

Manufacture of synthetic detergents, pharmaceuticals, dyes, pesticides, resins and smoke-producing chemicals.

Hazards:

Highly toxic. Avoid inhalation and skin contact. Keep away from water.

Fire fighting:

None required.

Will explode on contact with:

H_2SO_4
HNO_3

CRESOL
(C_7H_8O)

Synonyms:

Cresylic acid, cresylol, tricresol.

Description:

Can be clear or yellowish or yellow-brown or pink. Liquid.

Uses:

Disinfectant; resins; ore flotation; textile scouring agent; synthetic food flavors.

Hazards:

Moderately toxic; can burn skin. Keep away from heat and flame.

Fire fighting:

Foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

CUMENE
(C_9H_{12})

Synonyms:

Isopropyl benzene, z-phenyl propane, cumol.

Description:

Colorless liquid.

Uses:

Production of phenol, acetone and alpha-methylstyrene; solvent.

Hazards:

Moderately toxic. Do not expose to flame.

Fire fighting:

Foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

CYANIC ACID
(HOCN)

Synonym:

Isocyanic acid

Description:

Clear liquid. Acrid odor.

Uses:

Synthesis of organic compounds.

Hazards:

Highly toxic; avoid inhalation or skin contact.

Keep cool.

Fire fighting:

CO_2, dry chemical.

Will explode on contact with:

H_2SO_4

HNO_3

CYANIDE OF SODIUM
(NaCN)

Synonym:

Sodium cyanide

Description:

White, crystalline powder.

Uses:

Extraction of gold and silver from ores; heat treatment of metals; cleaning metal; fumigation.

Hazards:

Highly toxic; avoid inhalation; avoid skin contact, though this is a lesser problem. Keep cool and dry.

Fire fighting:

CO_2, dry chemical.

Will explode on contact with:

HNO_3

CYCLOHEXANOL
($C_6H_{12}O$)

Synonym:

Hexahydrophenol

Description:

Colorless needles in viscous liquid. Camphor-like odor.

Uses:

Manufacture of soap, insecticides, nylon, resins, lacquers, paint, varnish, finishes, removers and polishes.

Hazards:

Moderately toxic. Do not expose to heat or flame.

Fire fighting:

Alcohol foam, foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

CYCLOHEXANONE
($C_6H_{10}O$)

Synonyms:

Ketohexamethylene, pimelic ketone.

Description:

Colorless liquid. Acetone-like odor.

Uses:

Manufacture of woodstains, paint and varnish remover, spot remover and polish; lube-oil additive; solvent; degreasing metals; leveling agent in dyes; organic synthesis.

Hazards:

Moderately toxic. Do not expose to heat or flame.

Fire fighting:

Alcohol foam, foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

DIISOBUTYLENE
(C_8H_{16})

Synonym:

Trimethylpentene

Description:

Colorless liquid.

Uses:

Manufacture of plasticizers and rubber chemicals; alkylation, antioxidants, surfactants, lube-oil additives.

Hazards:

Moderately toxic. Keep strictly away from any heat source.

Fire fighting:

Foam, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4

DIMETHYL KETONE
(C_3H_6O)

Synonyms:

Ketone propane, propaneone, acetone.

Description:

Colorless liquid. Mint-like odor.

Uses:

Manufacture of paint, varnish, cellulose acetate; testing vulcanized rubber products; solvent.

Hazards:

Moderately toxic. Keep away from flame.

Fire fighting:

CO_2, dry chemical, alcohol foam.

Will explode on contact with:

H_2SO_4
HNO_3

EPICHLOROHYDRIN
(C_3H_5ClO)

Synonyms:

1-chloro-2, 3-epoxypropane.

Description:

Colorless liquid, chloroform-like odor.

Uses:

Manufacture of epoxy and phenoxy resins, glycerol and high wet-strength resins for paper; solvent for cellulose esters and ethers.

Hazards:

Highly toxic. Avoid inhalation or skin contact. Do not expose to heat or flame.

Fire fighting:

Foam, alcohol foam, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4
HNO_3

ETHYL ALCOHOL
(C_2H_6O)

Synonyms:

Ethanol, methyl carbinol, spirit of wine, grain alcohol.

Description:

Clear, colorless liquid, burning taste.

Uses:

Manufacture of dyes, pharmaceuticals, detergents, cleansers, cosmetics, antifreeze, beverages and gasohol; solvents, resins, fats, and oil.

Hazards:

Moderately toxic. Do not expose to heat or flame.

Fire fighting:

Alcohol foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

Note:

Ethyl Alcohol was the 50th highest-volume chemical in the U.S.A. in 1979. Due to the increasing popularity of gasohol it is rapidly becoming more common. It is easily produced from the fermentation of biomass. It is relatively safe to handle, even in the context under discussion.

For more information contact:
Solar Energy Research Institute (SERI)
Document Distribution Service
1617 Cole Boulevard
Golden, Colorado 80401
(303) 231-1158

ETHYLENE CYANOHYDRIN
(C_3H_5NO)

Synonyms:

Beta-hydroxypropionitrile, hydracyclo-nitrile, glycol cyanohydrin.

Description:

Colorless to yellow liquid.

Uses:

Solvent for cellulose esters and inorganic salts; organic intermediate for acrylates.

Hazards:

Moderately toxic. Do not expose to heat or flame. Keep dry.

Fire fighting:

CO_2, dry chemical, alcohol foam.

Will explode on contact with:

H_2SO_4

ETHYLENE DIAMINE
($C_2H_8N_2$)

Synonyms:
1, 2-ethane diamine, 1, 2-diamino ethane.

Description:
Colorless liquid. Ammonia-like odor.

Uses:
Manufacture of resins and textile lubricants; solvent; fungicide; antifreeze inhibitor.

Hazards:
Highly toxic; avoid inhalation and skin contact. Do not expose to heat or flame.

Fire fighting:
CO_2, alcohol foam, dry chemical.

Will explode on contact with:
H_2SO_4
HNO_3

ETHYLENE GLYCOL
($C_2H_6O_2$)

Synonyms:
1, 2-Ethanediol, glycol, ethylene alcohol, glycol alcohol.

Description:
Colorless liquid. Sweet taste.

Uses:
Manufacture of lacquers, resins, inks, wood

stains, adhesives, leather dyes, and deicing fluid; antifreeze; coolant; heat transfer agent.

Hazards:

Moderately toxic; can irritate skin. Do not expose to flame.

Fire fighting:

Alcohol foam, water, foam, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4

ETHYLENE IMINE
(C_2H_5N)

Synonyms:

Ethylenimine, dimethylenimine.

Description:

White liquid. Pungent odor.

Uses:

Manufacturing of pharmaceuticals, adhesives, and protective coatings; oil and lubricant refining.

Hazards:

Highly toxic; avoid inhalation and skin contact. Do not expose to heat or flame.

Fire fighting:

CO_2, dry chemical, alcohol foam.

Will explode on contact with:

H_2SO_4
HNO_3

HYDRAZINE
(N_2H_4)

Synonyms:

Hydrazine base, diamine, hydrazine anhydrous.

Description:

Colorless fuming liquid or white crystals.

Uses:

Manufacture of drugs, fibers, antioxidants; propellant, plating metal or glass; photographic developers.

Hazards:

Highly toxic; avoid inhalation or skin contact. Keep cool. Do not jar.

Fire fighting:

Foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

HYDRIODIC ACID
(HI)

Synonym:

Hydrogen iodine

Description:

Pale yellow liquid. Colorless gas.

Uses:

Manufacture of pharmaceuticals; disinfectants; preparation of iodine salts.

Hazards:

Moderately toxic; will damage skin. Keep dry.

Fire fighting:

Dry chemical, CO_2.

Will explode on contact with:

HNO_3

HYDROFLUORIC ACID
(HF)

Synonyms:

Hydrogen fluoride, fluorohydric acid.

Description:

Clear, colorless, fuming liquid or gas.

Uses:

Manufacture of aluminum, fluorocarbons, gasoline; processing uranium; etching glass; acidizing oil wells.

Hazards:

Highly toxic; avoid inhalation or skin contact. Keep cool and dry.

Fire fighting:

Dry chemical, CO_2.

Will explode on contact with:

H_2SO_4

HYDROGEN PEROXIDE
(H_2O_2)

Synonyms:

Hydrogen dioxide, T-stuff.

Description:

Colorless heavy liquid. Colorless crystals.

Uses:

Manufacture of pulp, paper, and plasticizers; substitute for chlorine in water treatment; wine distillation; refining and cleaning metals; bleaching of textiles, wood, and fur.

Hazards:

Highly toxic; avoid inhalation or skin contact. Keep cool. Do not jar or concentrate.

Fire fighting:

Dry chemical, CO_2.

Will explode on contact with:

H_2SO_4
HNO_3

ISOPRENE
(C_5H_8)

Synonyms:

2-Methyl-1, 3-Butadiene.

Description:

Colorless liquid.

Uses:

Manufacture of polyisoprene and Butyl rubber.

Hazards:

Moderately toxic. Do not expose to heat, flame, or sparks.

Fire fighting:

CO_2, dry chemical.

Will explode on contact with:

H_2SO_4
HNO_3

ISOPROPYL ETHER
($C_6H_{14}O$)

Synonyms:

2-isopropoxy propane, oiisopropyl ether.

Description:

Colorless liquid. Etheral odor.

Uses:

Manufacture of rubber cement; solvent for oils and dyes; paint and varnish remover.

Hazards:

Low toxicity when cool. Keep away from flame or sparks. Do not jar.

Fire fighting:

Alcohol foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

MANGANESE
(Mn)

Synonyms:

None

Description:

Reddish-grey or silvery brittle metallic element.

Uses:

Manufacture of steel, aluminum, and non-ferrous alloys; purifying agent in metal production.

Hazards:

Highly toxic; avoid inhalation or skin contact. Do not expose to flame; keep dry.

Fire fighting:

Special dry chemical.

Will explode on contact with:

HNO_3

MESITYL OXIDE
($C_6H_{10}O$)

Synonym:

4-Methyl-3-penten-2-one.

Description:

Oily, colorless liquid. Honey-like odor.

Uses:

Manufacture of methyl isobutyl ketone; solvent; ore flotation; insect repellent; paint and varnish remover.

Hazards:

Moderately toxic; avoid skin contact. Do not expose to heat or flame.

Fire fighting:

Alcohol foam, CO_2 dry chemical.

Will explode on contact with:

H_2SO_4
HNO_3

METHYL CYANIDE
(C_2H_3N)

Synonyms:

Ethanen itrile, acetonitrile.

Description:

Colorless liquid. Aromatic odor.

Uses:

Manufacture of pharmaceuticals, vegetable oils, and hydrocarbons; solvent.

Hazards:

Moderately toxic. Keep cool and dry.

Fire fighting:

Foam, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4

NITROBENZENE
($C_6H_5NO_2$)

Synonyms:

Oil of mirbane, nitrobenzol.

Description:

Bright yellow crystals or yellow oily liquid. Almond-like odor.

Uses:

Manufacture of aniline, metal polish, shoe polish, benzidine, and quinoline; solvent for cellulose ethers.

Hazards:

Moderately toxic. Do not expose to heat or flame. Do not jar.

Fire fighting:

Water, foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

PERCHLORIC ACID
($HClO_4$)

Synonyms:

None

Description:

Colorless fuming liquid.

Uses:

Manufacture of esters; electropolishing; deposition of lead.

Hazards:

Highly toxic; avoid inhalation or skin contact. Keep cool; do not jar.

Fire fighting:

Water, foam.

Will explode on contact with:

H_2SO_4

PHENYL ETHYLENE
(C_8H_8)

Synonyms:

Vinyl benzene, styrene (monomer), cinnamene.

Description:

Colorless, oily liquid.

Uses:

Manufacture of a wide variety of resins and protective coatings.

Hazards:

Moderately toxic; can harm skin. Do not expose to heat or flame.

Fire fighting:

Foam, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4

PHOSPHOROUS TRICHLORIDE
(PCl_3)

Synonym:

Phosphorous chloride

Description:

Clear colorless fuming liquid.

Uses:

Manufacture of pesticides, gasoline additives, dye stuffs, and plasticizers; used as a chlorinating agent and as a textile finishing agent.

Hazards:

Highly toxic; can damage skin. Keep cool and dry.

Fire fighting:

CO_2, dry chemical.

Will explode on contact with:

HNO_3

PARA-PHTHALIC ACID
($C_8H_6O_4$)

Synonyms:

Benzene dicarboxylic acid, TPA terephthalic acid.

Description:

White crystalline needles.

Uses:

Manufacture of resins, fibers, and films; additive to poultry feed; reagent for alkali in wool.

Hazards:

Moderately toxic; can damage skin. Do not expose to heat or flame.

Fire fighting:

Foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

PHTHALIC ANHYDRIDE
($C_8H_4O_3$)

Synonym:

Phthalandione

Description:

White crystalline needles. Mild odor.

Uses:

Manufacture of resins, plasticizers, dyes, chlorinated products, pharmaceuticals, and insecticides.

Hazards:

Moderately toxic. Do not expose to flame.

Fire fighting:

CO_2, dry chemical.

Will explode on contact with:

HNO_3

BETA-PROPIOLACTONE
($C_3H_4O_2$)

Synonyms:

None

Description:

Clear liquid. Pungent odor.

Uses:

Disinfectant, vapor sterilant, and organic synthesis.

Hazards:

Highly toxic; avoid inhalation or skin contact. Avoid open flame.

Fire fighting:

Alcohol foam.

Will explode on contact with:

H_2SO_4
HNO_3

PROPYLENE OXIDE
(C_3H_6O)

Synonyms:

1, 2-Epoxypropane, propane oxide, methyl oxirane.

Description:

Colorless liquid. Etheral odor.

Uses:

Manufacture of urethane foams; detergents, lubricants, solvents, fumigants, and surfactants.

Hazards:

Moderately toxic. Do not expose to heat or flame.

Fire fighting:

Alcohol foam, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4.

PYRIDINE
(C_5H_5N)

Synonyms:

None

Description:

Colorless liquid. Sharp odor. Burning taste.

Uses:

Manufacture of vitamins, drugs, solvents, and antifreeze; waterproofing, denaturing alcohol and textile dyeing; fungicide.

Hazards:

Moderately toxic. Do not expose to heat or flame.

Fire fighting:

Alcohol foam.

Will explode on contact with:

H_2SO_4
HNO_3

SILVER PERMANGANATE
($AgMnO_4$)

Synonyms:

None

Description:

Violet crystalline powder.

Uses:

Manufacture of gas masks. Used as an antiseptic.

Hazards:

Moderately toxic; can discolor skin. Do not expose to heat or flame. Do not jar.

Fire fighting:

Water.

Will explode on contact with:

H_2SO_4

TITANIUM
(Ti)

Synonyms:

None

Description:

Dark gray powder or white lustrous metal.

Uses:

Manufacture of alloys for a variety of special applications; X-ray tube target; electrodes in chlorine batteries.

Hazards:

Non-toxic. Do not expose to heat or flame.

Fire fighting:

Smother with sand, powdered talc or G-1 powder.

Will explode on contact with:

HNO_3

O-TOLUIDINE
(C_7H_5N)

Synonyms:

0-Methylaniline, 0-aminotoluene.

Description:

Colorless liquid, red or brown if exposed to air.

Uses:

Manufacture of textile printing dyes, vulcanization accelerator, organic synthesis.

Hazards:

Highly toxic; avoid inhalation or skin contact. Keep cool.

Fire fighting:

Foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

VINYL ACETATE
($C_4H_6O_2$)

Synonyms:

None

Description:

Colorless liquid. Becomes solid on exposure to light.

Uses:

Manufacture of latex paint, paper coatings, adhesives, textile finishing, safety glass, and resins.

Hazards:

Moderately toxic. Keep away from heat or flame.

Fire fighting:

Alcohol foam, CO_2, dry chemical.

Will explode on contact with:

H_2SO_4
HNO_3

VINYL CYANIDE
(C_3H_3N)

Synonyms:

Acrylonitrile, propane nitrile.

Description:

Colorless liquid. Mild odor.

Uses:

Manufacture of acrylic fibers, nitrile rubber, wood pulp, and synthetic soil blocks; fumigation of grains.

Hazards:

Highly toxic; avoid inhalation and skin contact. Keep cool.

Fire fighting:

CO_2, dry chemical, alcohol foam.

Will explode on contact with:

H_2SO_4
HNO_3

VINYLIDENE CHLORIDE
($C_2H_2Cl_2$)

Synonyms:

1, 1-Dichloro ethylene.

Description:

Colorless liquid.

Uses:

Manufacture of Saran Wrap, adhesives, and synthetic fibers.

Hazards:

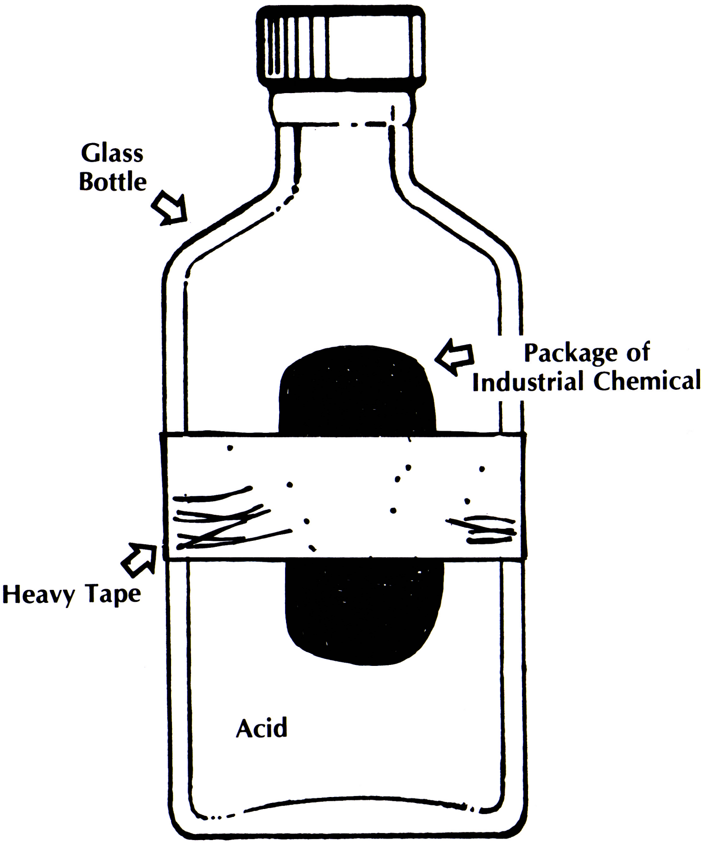
Highly toxic; avoid inhalation. Will damage skin. Do not expose to heat or flame.

Fire fighting:

Alcohol foam, CO_2, dry chemical.

Will explode on contact with:

HNO_3

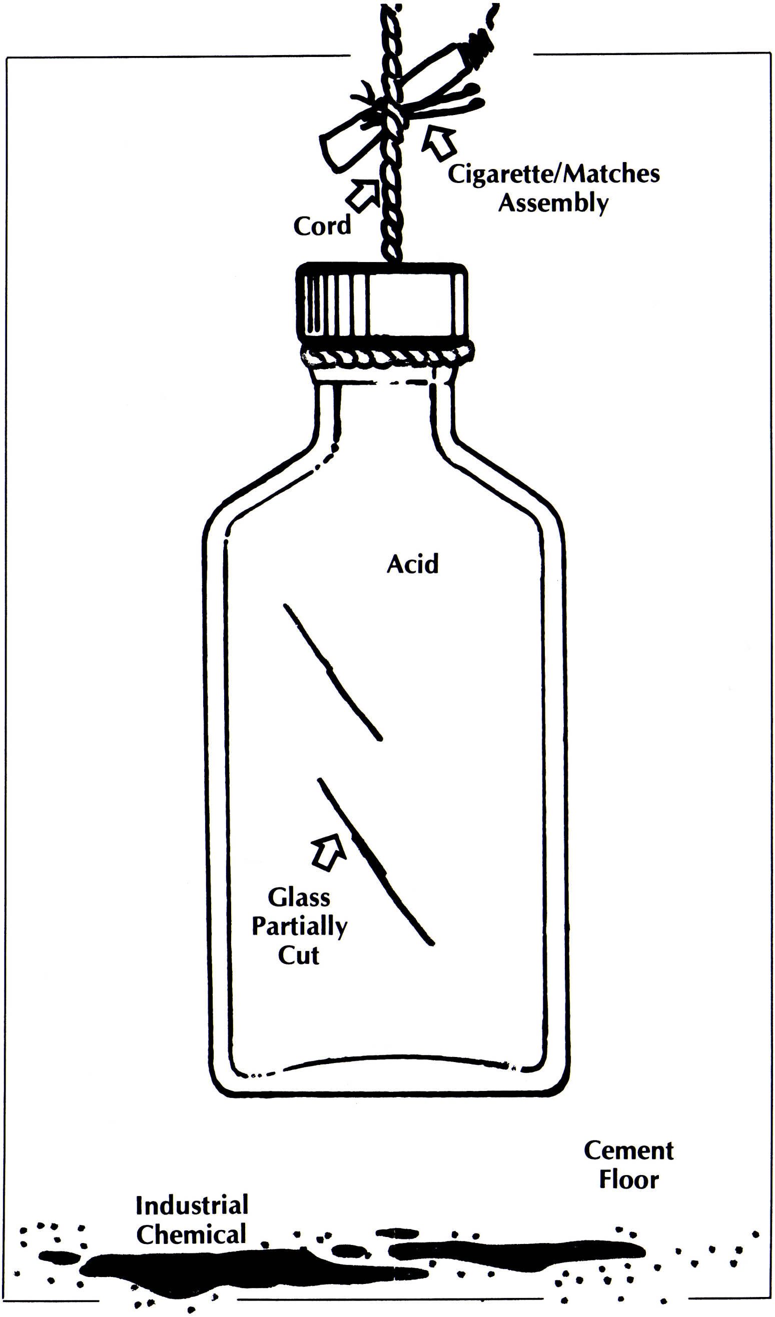

Glass
Bottle
Package of
Industrial Chemical
Heavy Tape
Acid

CHAPTER IV

DEVICES

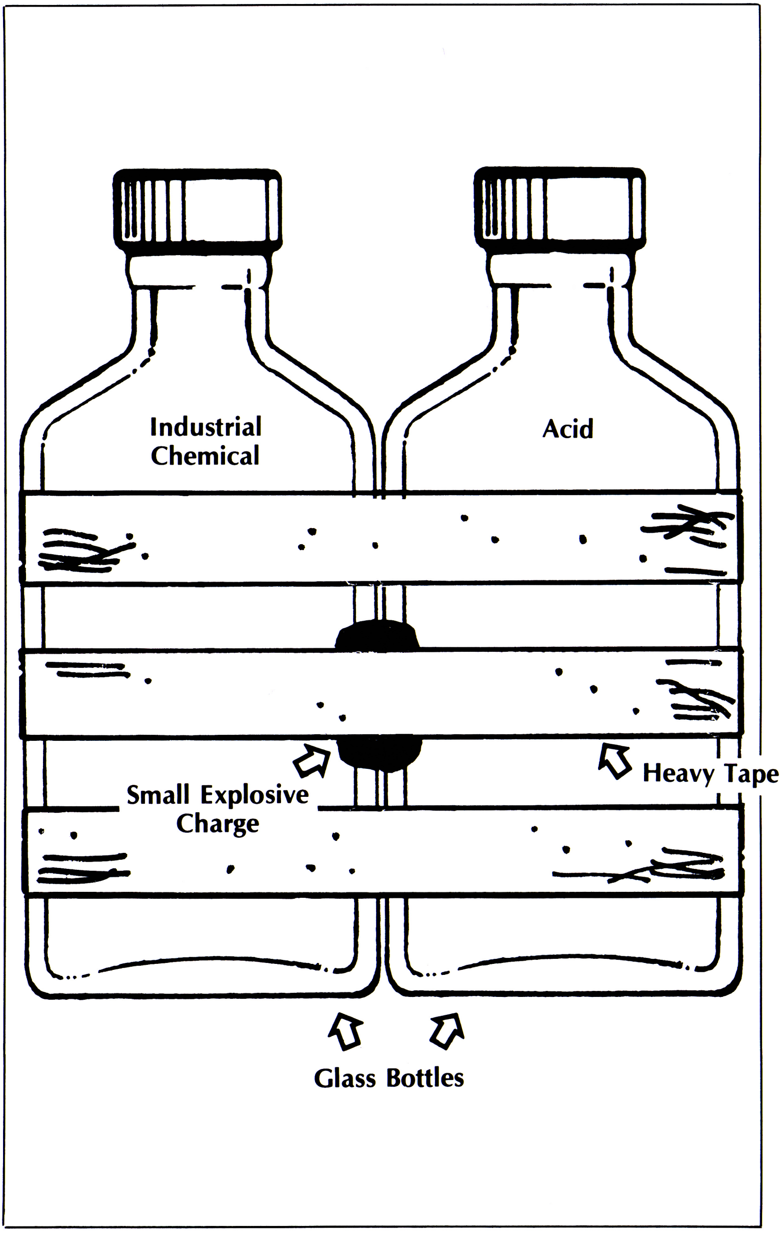
SINGLE BOTTLE BOMB I

1. Fill a bottle 90 percent full of acid. Cap securely.
2. Fill a small sack (jute or other sturdy material) with industrial chemical.
3. Tape the package to the side of the bottle. When the bottle is broken the acid will destroy the sack and come into contact with the industrial chemical. Detonation will occur. It is not recommended to throw this device Molotov cocktail-style. It is best dropped off a roof onto enemy troops or vehicles.


Cigarette/Matches Assembly
Cord
Acid
Glass Partially Cut
Cement Floor
Industrial Chemical

SINGLE BOTTLE BOMB II

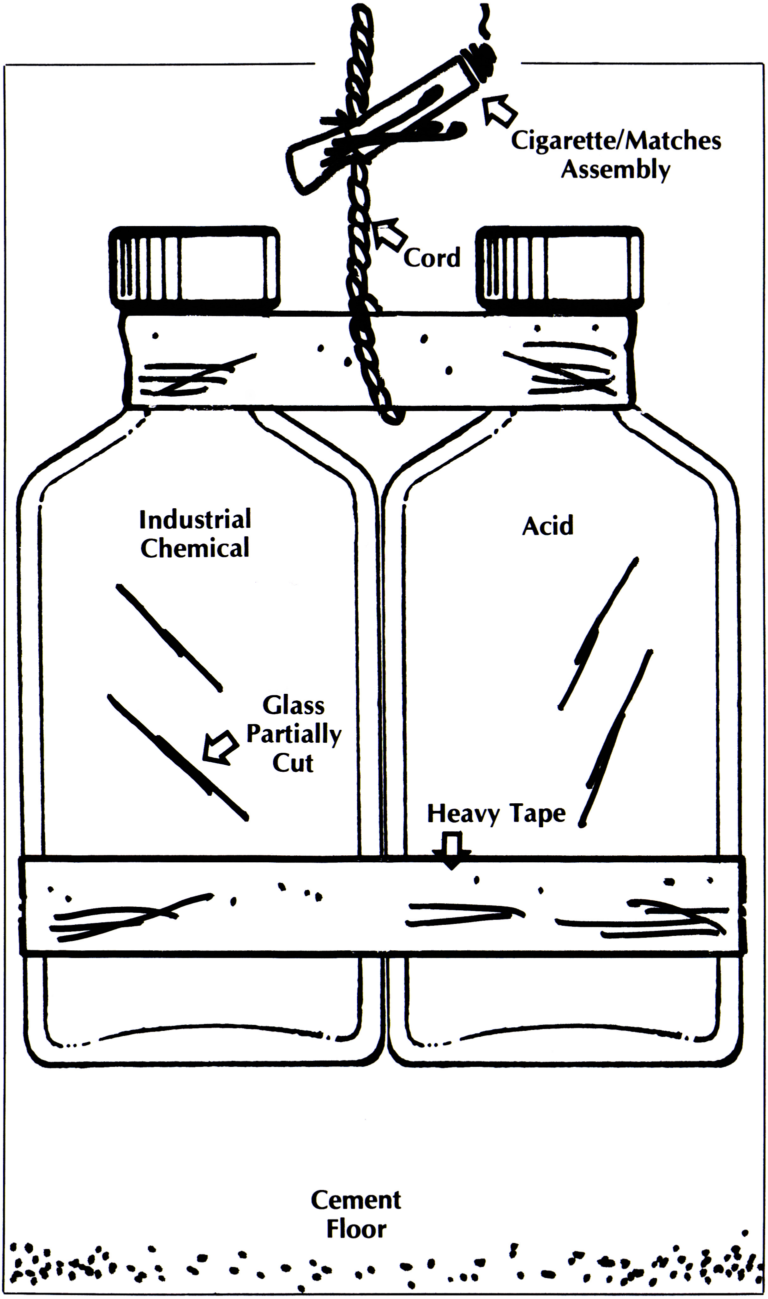
1. Fill a bottle 90 percent full of acid. Cap securely.
2. Partially cut, thereby weakening it, the glass with a glass cutter.
3. Suspend the bottle with cord, a minimum of seven feet above a cement or tile floor.
4. Pile industrial chemical on the floor, around but not under the bottle.
5. Attach a cigarette and matches assembly to the cord. The cigarette will eventually ignite the matches. The cord will burn through and the bottle will drop. When the bottle breaks, the acid comes into contact with the industrial chemical. Detonation will occur.


Industrial Chemical
Acid
Small Explosive Charge
Heavy Tape
Glass Bottles

DOUBLE BOTTLE BOMB I

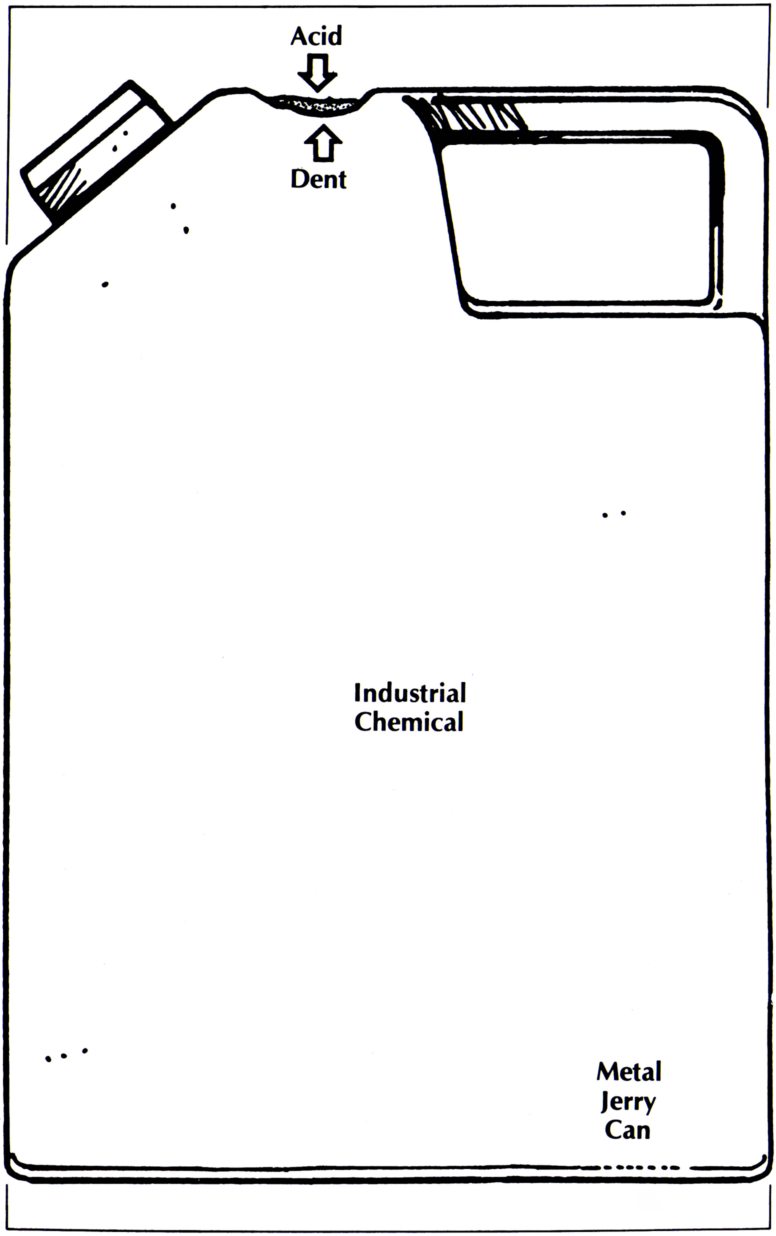
1. Fill a bottle 90 percent full of acid. Cap securely.
2. Fill a second bottle 90 percent full of industrial chemical. Cap securely.
3. Join the two bottles with heavy tape.
4. Place a small explosive charge between, and in contact with both bottles.
5. Detonate the explosive charge in any convenient manner. However, be sure to use an explosive charge which will break both bottles but not scatter the contents. One number eight blasting cap will usually suffice.

The charge will break both bottles. The acid and the industrial chemical will come into contact. Detonation will occur.


Cigarette/Matches Assembly
Cord
Industrial Chemical
Acid
Glass Partially Cut
Heavy Tape
Cement Floor

DOUBLE BOTTLE II

1. Fill one bottle 90 percent full of acid. Cap securely.
2. Fill a second bottle 90 percent full of industrial chemical. Cap securely.
3. Join the two bottles with heavy tape.
4. Partially cut the glass of each bottle with a glass cutter.
5. Suspend the bottles with cord, a minimum of seven feet above a cement or tile floor.
6. Attach a cigarette and matches assembly to the cord. The cigarette will eventually ignite the matches. The cord will burn through and the bottles will drop. When the bottles break the acid comes into contact with the industrial chemical. Detonation will occur.


Acid
Dent
Industrial Chemical
Metal Jerry Can

JERRY CAN BOMB

1. Create a large dent in the top of a metal jerry can.
2. Check carefully that in forming the dent, the jerry can is not ruptured.
3. Fill the jerry can with industrial chemical.
4. Pour acid directly into the dent. The acid will burn through the metal and come into contact with the industrial chemical. Detonation will occur.

APPENDIX

RECOMMENDED READING

Condensed Chemical Dictionary
G.G. Hawley
Van Nostrand Reinhold

Dangerous Properties of Industrial Materials
N.I. Sax
Van Nostrand Reinhold

Encyclopedia of Chemistry
S.P. Parker
McGraw-Hill

Handbook for Chemical Technics
H.J. Strauss
McGraw-Hill

Handbook of Industrial Chemistry
E.R. Riegel
Van Nostrand Reinhold

Handbook of Reactive Chemical Hazards
L. Bretherick
The Butterworth Group

Rocket Propulsion Elements
G.P. Sutton
John Wiley and Sons

TM 9-1385-211
Department of the Army Technical Manual E.O.D. Information for Solid and Liquid Propellants, Conventional Explosives and Other Dangerous Materials.

DEADLY BREW

When you want to know how to construct a big bang, don't theorize—get the facts! Making an advanced improvised explosive can be as deadly to the manufacturer as it is to the target, so learn how to do it right!

Author of *Improvised Explosives: How to Make Your Own*, Seymour Lecker details how to make explosives which, upon detonation, combine a strong industrial acid with a common industrial chemical. Fifty common industrial chemicals are described, as are two detonating acids, five explosive device designs, and a reference of other books.

For information only.

A PALADIN PRESS BOOK
ISBN 0-87364-418-2

ISBN 0-87364-418-2
90000
9 780873 644181

Visit our Web site at www.paladin-press.com